



Using NABat QA/QC Tools

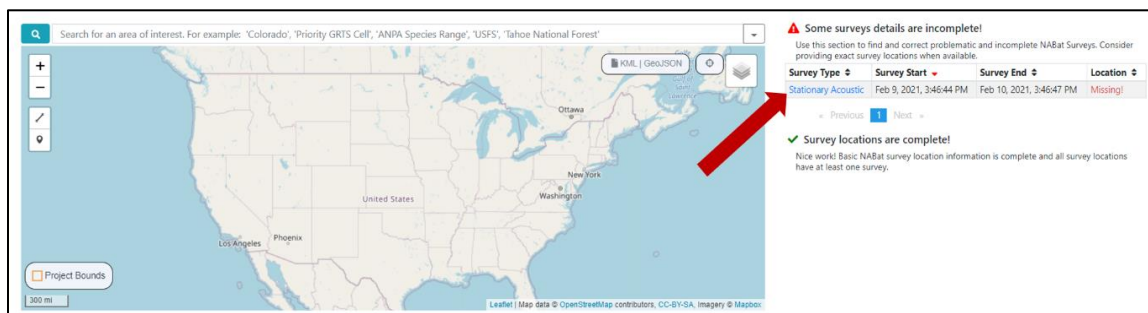
The NABat Partner Portal features a number of automated warnings to help users ensure their monitoring data is complete and accurate. These warnings appear beneath the project details, to the right of the project map, on a user's project homepage and include warnings for incomplete survey details, unused/incomplete location data, unknown locations, and potential duplicate locations. The following document provides guidance for interpreting QA/QC warnings and using the available tools to correct or supplement metadata when necessary. Note that changes made through the user interface, following the guidance below, will supplement metadata originally provided through a bulk upload and no additional steps are necessary.

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Survey Details Incomplete

The "Some survey details are incomplete" warning indicates that a survey event has been created and saved without required metadata. The warning will include a table with columns that indicate what metadata is missing (e.g., Survey Start Time, Survey End Time, Location, etc.). This typically occurs when a user manually creates a survey deployment through the NABat user interface rather than through the bulk upload template. To complete survey details and resolve this warning:

1. Click the blue hyperlink in the "Survey Type" column to view the deployment details in the user interface.



2. Click the green "Edit Survey Details" button in the top right corner of the deployment to provide additional details (or click the red button to delete the deployment if it was created in error or is a duplicate).



3. Provide the missing survey details through the user interface. Survey start time/end time can be entered directly into the fields above the deployment map. Missing survey locations can be provided using the deployment map and the available drawing features. For stationary surveys, use the "Mark a survey location" feature to drop a point anywhere on the map; use the "Edit" button to provide latitude and longitude and move the point. Users may also opt to provide data at the GRTS Cell level by clicking the "Unknown or undisclosed location" button at the top right corner of the map. For mobile transects, use the "Mark a transect route" feature to draw a mobile transect route and save it as a spatial object. Alternatively, both point locations and transect routes can be uploaded as .kml or .geojson files using the "KML|GeoJSON" button on the project map.

New Survey Location | February 09 2021 - February 10 2021

Survey Start Time: 2/9/2021, 3:46 PM | Survey End Time: 2/10/2021, 3:46 PM | **Set Time based on GTS location**

Created By: danielm@gsn.gov | Created Date: Feb 11, 2021, 8:47:07 AM
File Name: Manual Creation
Transaction UUID:

Select a location within this HubNet cell. Use the map tools below to place or draw a new location. You can add a location by latitude and longitude by dropping a pin and editing its location.

New Survey Location

Name: New Survey Location
Description:
HubNet Survey Location:
Survey Type:
Latitude: 33.887017 | Longitude: -104.794781
GTS Device: Creastron 04
ID: 2021-02-18T18:16:28.628540

Save **Cancel**

Minimum on unselected location

Search for an area of interest, for example: "Colorado", "Priority GTS Cell", "WPA Species Range", "VGP", "Service National Forest"

Survey details are complete!
Note: Survey details are complete! If complete, problematic and incomplete surveys will be shown below.
Some survey locations are unused or incomplete!
Use this section to find and correct incomplete and unused survey locations.

| Location Name | Survey Type | Survey Count |
|--------------------|----------------|--------------|
| Threatened Species | Unknown Threat | 0 |
| New Location | Unknown | 0 |
| New Location | Unknown | 0 |

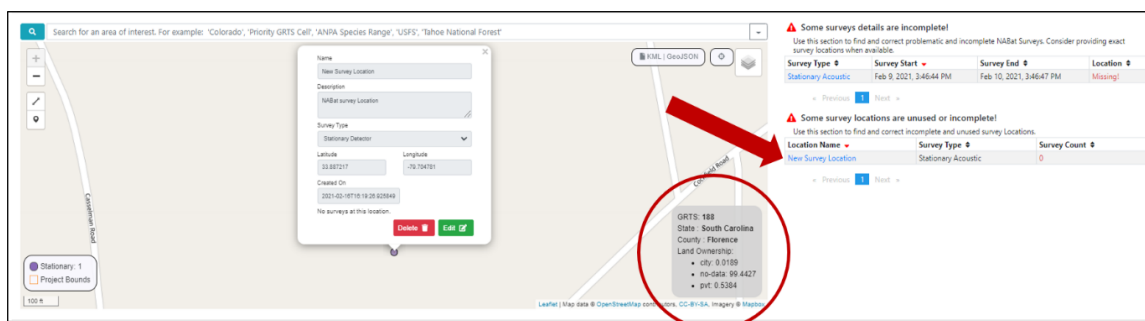
Show 0 unselected locations

Survey Locations Unused

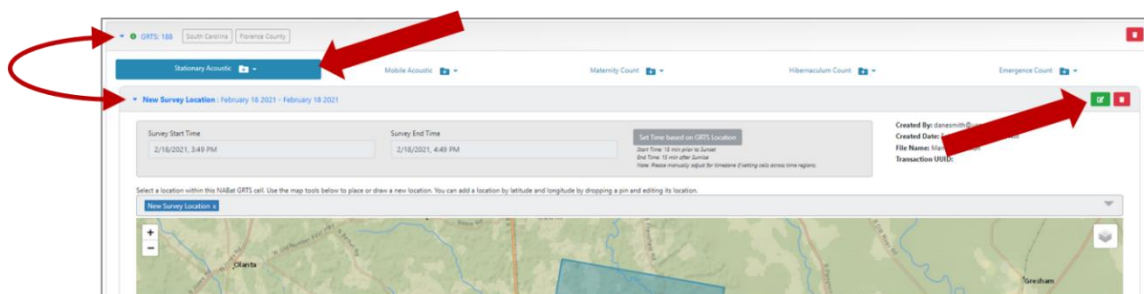
The "Some survey locations are unused" warning indicates that a spatial object (point, transect, or GRTS cell) has been saved as a survey location but no survey events have been associated with that site. This typically occurs when a user manually saves a location using the drawing tools on the project map or uploads a spatial object as a .kml/.geojson file but fails to provide survey metadata. The warning serves as a reminder to project members that the location has been saved and should either be associated with a survey event or deleted.

To associate an existing survey event with a location:

1. Click the blue hyperlink in the "Location Name" column to view the unused location on the project map.
2. Hover the mouse over the point to determine the GRTS cell in which the location is saved. The GRTS cell number will appear in a pop-up window in the bottom right corner of the map.



3. Scroll down through the list of GRTS cells in your project to locate the survey in question.
4. Click the blue arrow beside the relevant GRTS cell and select the appropriate survey type to expand the user interface and view all surveys conducted within that cell.
5. When the relevant survey has been located, click the blue arrow beside the survey name to expand the survey details.



6. Click the green "Edit Survey Details" button in the top right corner of the deployment's user interface.
7. Click the drop-down menu located above the map to view saved locations within the GRTS cell.
8. Select the desired location and click the green "Save" button in the top right corner of the deployment user interface.

Stationary Acoustic Mobile Acoustic Maternity Count Hibernaculum Count Emergence Count

New Survey Location February 17, 2021 - February 17, 2021

Survey Start Time: 2/17/2021, 7:30 PM Survey End Time: 2/17/2021, 8:30 PM

Set Time based on GRTS location
Start Time: 12 min prior to Survey
End Time: 12 min after Survey
Note: Please manually adjust for time zone if setting cells across time regions.

Created By: daniel@h-gov
Created Date: Feb 17, 2021, 2:00:36 PM
File Name: Manual Creation
Transaction UUID:

Select a location within this NABat GRTS cell. Use the map tools below to place or draw a new location. You can add a location by latitude and longitude by dropping a pin and editing its location.

New Survey Location

New Survey Location

Unknown or undiscussed location?

To associate a new survey event with a location (bulk upload):

1. Make note of the saved location's **exact name** (case sensitive).
2. Include the saved location's **exact name** in the "Location Name" (acoustic data) or "Site Name" (hibernacula counts) column of the bulk upload template along with other survey metadata.
3. Each row of metadata in the bulk upload template that includes the saved location's name will be assigned to that point/line.

To associate a new survey event with a location (user interface):

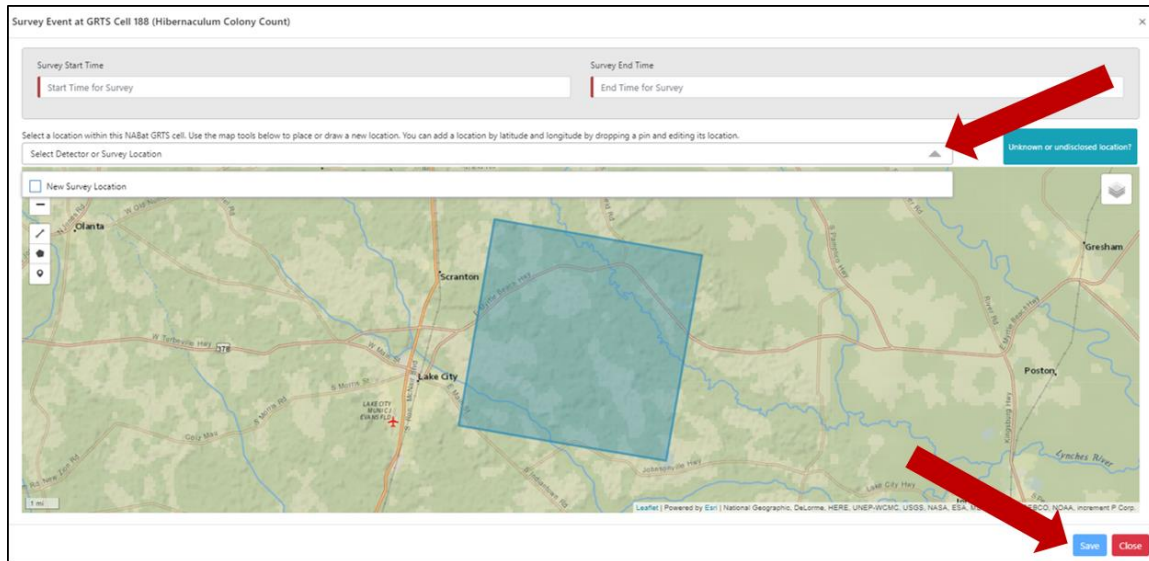
1. Scroll down through the list of GRTS cells in your project to locate the cell in which you wish to create a new survey.
2. Click the blue arrow beside the GRTS cell number to expand the survey types.
3. Click the folder icon beside the desired survey type and select "Single Entry" to create a new survey event.

Stationary Acoustic Mobile Acoustic Maternity Count Hibernaculum Count Emergence Count

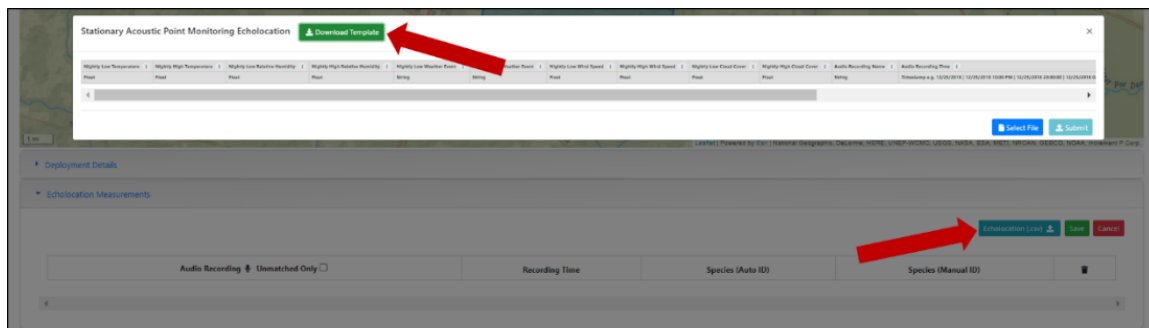
To Add, click on the dropdown above.

Single Entry - Hibernaculum

4. Complete the required fields (Survey Start Time, Survey End Time, etc.) and use the drop-down menu located above the map to select the desired location from the list.
5. Click the blue "Save" button in the bottom right corner of the window.



6. Once the survey event is saved, click the green "Edit Survey Details" button in the top right corner of the survey event details.
7. Additional metadata can be added by scrolling down to the "Deployment Details" section and entering the desired information.
8. To add detection data for acoustic surveys:
 - a. Scroll down to the "Echolocation Measurements" section and click the blue arrow to expand.
 - b. Click the green "Edit Deployment Details" button in the top right corner of the section.
 - c. Click the "Echolocation (.csv)" button and select the "Download Template" button in the pop-up window to save the recording-level bulk upload template to your local machine.



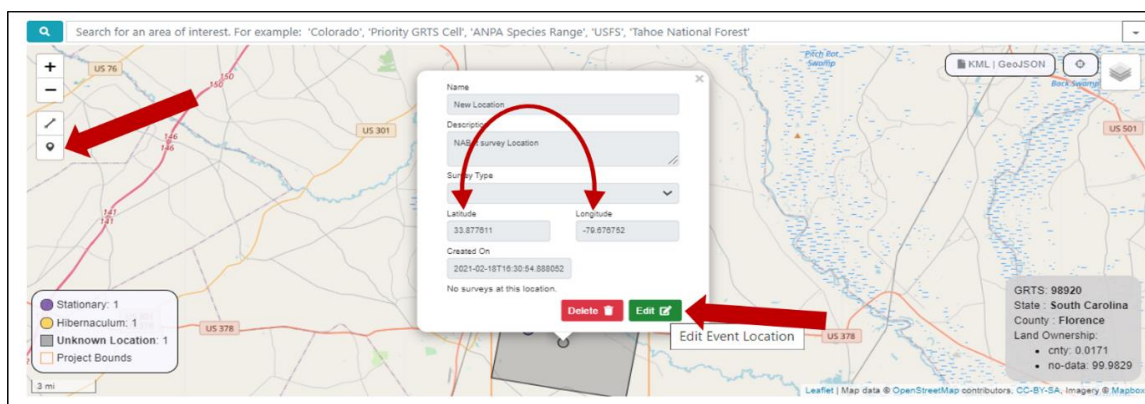
- d. Complete the recording-level bulk upload template and save the file with a unique name. Required fields include Audio Recording Name, Software Type, Auto ID or Manual ID, and Species List.
- e. Return to the "Echolocation Measurements" section of the survey event, click the green "Edit Deployment Details" button, select the blue "Echolocation (.csv)" button, and click "Select File."
- f. Navigate to the completed bulk upload template, click "Open," and click "Submit."

- g. The uploaded file will appear under the "Bulk Upload Status" tab at the top of the project page. Once the upload has been processed, check the status to ensure there are no errors. If errors are present in the uploaded document, click the blue hyperlink in the "Errors Found" column to download a CSV file identifying which rows have errors and what error occurred (the final two columns of the document). Errors should be corrected in the original document and re-uploaded through to the "Echolocation Measurements" section of the survey event user interface. As long as the corrected CSV file retains the same name, the first upload (which contained errors) will be replaced by the corrected document; the NABat database will automatically replace CSV files with duplicate names with the most recent upload. **Rows with errors are dropped/ignored by the NABat system, so it is crucial that errors are corrected. Otherwise, metadata for those rows will not be saved in the NABat database.**
9. To add count data for hibernacula surveys or emergence counts:
 - a. Scroll down to the "Species Counts" section and click the blue arrow to expand.
 - b. Click the green "Edit Deployment Details" button in the top right corner of the section.
 - c. Click the "+" button.
 - d. Use the drop-down menus to provide Species, Count Method, Observer(s), and Count (required fields). Count Confidence, Min Estimate, Max Estimate, and Count Dead are not required but should be filled if data were recorded for those fields.
 - e. Repeat steps c-d for all species observed during the survey.

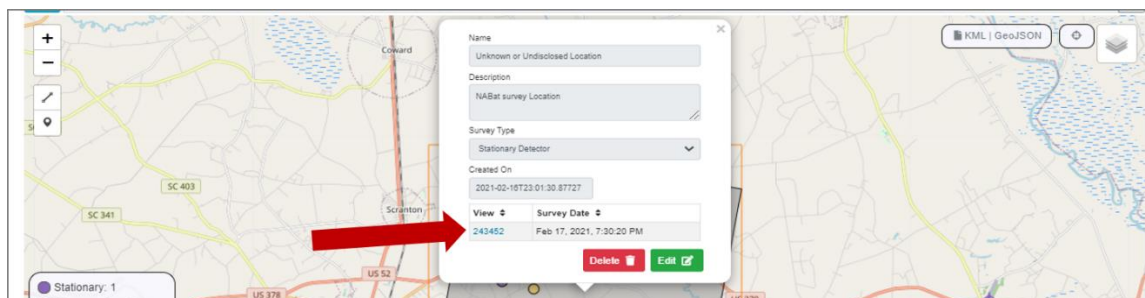
Show Unknown Locations

The "Show Unknown Locations" warning indicates that a location has been provided at the GRTS cell level without X,Y coordinates. This can occur when users manually create a survey event through the user interface and indicate the site is an "Unknown or undisclosed location" or when users provide metadata through the bulk upload template with GRTS cell values but no latitude or longitude. Unknown locations are not necessarily errors; some users prefer to provide data at the GRTS cell level rather than the point level. In these cases, the "Show Unknown Locations" warning can be ignored. However, users may prefer to provide more detailed location information. In such cases, the following guidance should be followed:

1. Click the "Show Unknown Locations" button to expand the table and view all unknown locations.
2. Click the blue hyperlink in the "Location Name" column to zoom the map to the selected location.
3. Click the "Mark a survey location button" and drop a point in the grey cell.
4. Click the green "Edit" button in the pop-up window.
5. Enter the desired location name, latitude, and longitude, and use the drop-down menu to indicate the type of survey conducted.
6. Click the green "Save" button.



7. Return to the "Show Unknown Locations" table and click the blue hyperlink for the previously selected location.
8. **If survey events have already been associated with the GRTS cell level location**, a summary table will appear below the location details; click any of the blue hyperlinks in the "View" column to expand the survey event details in the user interface. Continue to Step 9.



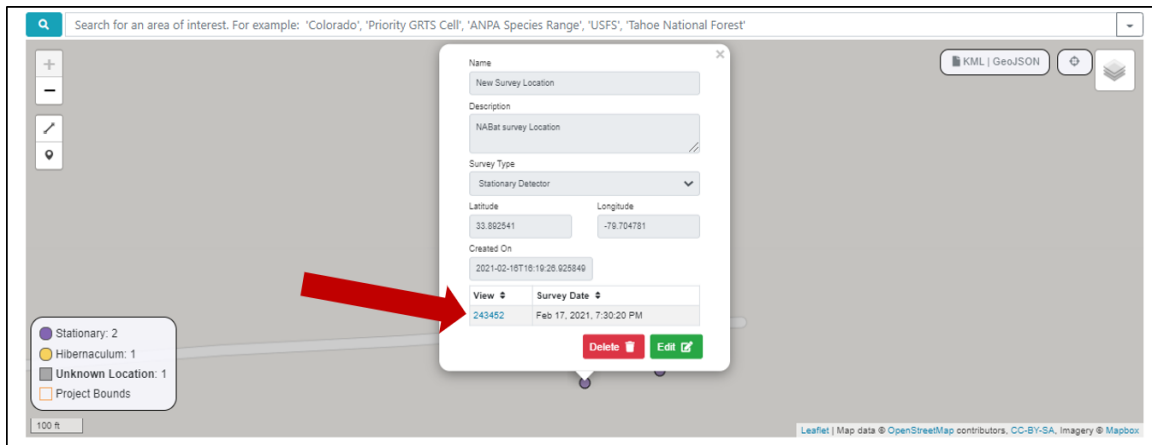
If no survey events have been associated with the location (no table appears with survey event summaries), it will appear in the "Some survey locations are unused" table. Click the blue hyperlink in the "Location Name" column to zoom the map to the location and click the red delete button to remove the GRTS cell level location from the project.

9. Click the blue arrow beside the first survey event to expand survey details.
10. Click the green "Edit Deployment Details" button in the top right corner of the deployment's user interface.
11. Click the drop-down menu located above the map to view saved locations within the GRTS cell.
12. Select the new point/line location created in Steps 3-6 and click the green "Save" button in the top right corner of the deployment user interface.
13. Repeat Steps 9-12 for all survey events associated with the GRTS cell level location to associate the survey events with the new point/line location.
14. Return to the project map at the top of the page. If all survey events were successfully associated with the new point/line location and there are no longer any survey events associated with the GRTS cell level location, it will now appear in the "Some survey locations are unused" table.
 - a. Click the blue hyperlink for the location's name to zoom the map to the saved location.
 - b. Click the red "Delete" button.

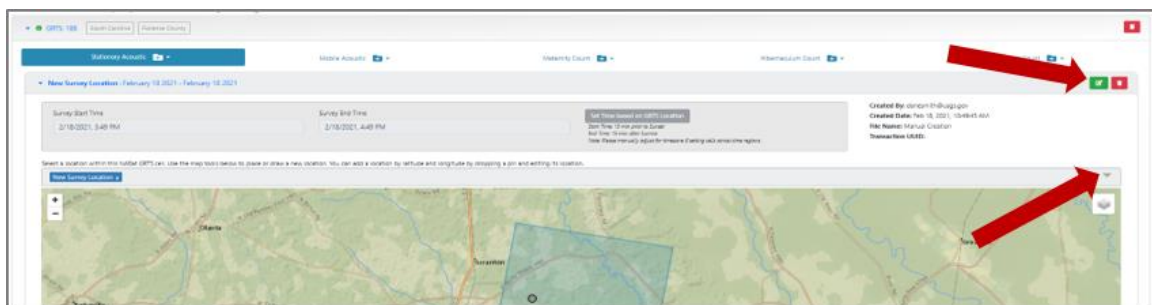
Show Possible Duplicate Locations

This warning indicates that the project contains ≥ 1 survey location(s) within 100 m of another saved location. Often, this occurs when a survey location is established and minor variations, either in the latitude/longitude or the location name, are introduced in subsequent survey years. This warning does not necessarily indicate an error. In some instances, survey locations may be within 100 m of another survey location, particularly for hibernacula surveys or emergence count events. However, in most instances, especially for stationary point acoustic surveys, survey locations should not be within 100 m of another site, and these locations should be combined into a single survey site. To assign survey events from duplicate locations to a single site:

1. Click the "Show Possible Duplicate Locations" button to expand the table and view all possible duplicate locations.
2. Click the blue hyperlink in the "Location 1" column to zoom the map to the selected location. A summary table showing all survey events at that location will appear below the location details.
3. Click the blue hyperlink in the "Location 2" column to zoom the map to the selected location. A summary table showing all survey events at that location will appear below the location details.
4. Decide which point you wish to use for all survey events and which point you wish to remove. If the location you wish to remove has no survey events associated with it (no table appears in the location details on the map), click the red delete button in the survey details to remove the location. If the saved location you wish to remove has associated survey events, click any of the blue hyperlinks in the "View" column to expand the survey event details in the user interface.



5. Click the green "Edit Deployment Details" button in the top right corner of the deployment details.



6. Click the drop-down menu above the map to view all saved locations within the GRTS cell. Select the location you wish to keep and click the green "Save" button in the top right of the deployment details.
7. Repeat Steps 5-6 for all survey events associated with the location you wish to remove.
8. Return to the project map at the top of the page. Once all survey events associated with the duplicate location you wish to remove have been successfully associated with the location you wish to keep, the duplicate location will appear under the "Some survey locations are unused" table. Click the blue hyperlink in the "Location Name" column to zoom to the duplicate location on the project map.
9. Click the red "Delete" button to remove the duplicate location.